

REMARKS

This responds to the Office Action mailed on December 11, 2007. Claims 1-29 are pending in this application.

§101 Rejection of the Claims

Claims 1-5

Claims 1-5 were rejected under 35 USC § 101 because the claimed invention is directed to non-statutory subject matter. The Office indicated that “[t]he claims lack necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 35 USC 101. The Office further indicated that claims 1-5 are “functional descriptive material per se.” Applicant respectfully traverses.

Claims 1-5 are directed to one of the enumerated categories of patentable subject matter. Claims include the limitations of a cryptographic unit and a memory. Applicant respectfully submits that a cryptographic unit and a memory are not “functional descriptive material per se.”

Such claims fall within at least one of the four enumerated categories of patentable subject matter recited in 35 U.S.C. § 101, which states:

Whoever invents or discovers any new and useful **process, machine, manufacture, or composition of matter**, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.
(Emphasis added).

35 U.S.C. § 101.

Further, the MPEP states:

B. Determine Whether the Claimed Invention Falls Within An Enumerated Statutory Category

To properly determine whether a claimed invention complies with the statutory invention requirements of 35 U.S.C. 101, **USPTO personnel must first identify whether the claim falls within at least one of the four enumerated categories of patentable subject matter recited in section 101 (i.e., process, machine, manufacture, or composition of matter).**

In many instances it is clear within which of the enumerated categories a claimed invention falls. Even if the characterization of the claimed invention is not clear, this is usually not an issue that will preclude making an accurate and correct assessment with respect to the section 101 analysis. The scope of 35 U.S.C. 101 is the same regardless of the form or category of invention in

which a particular claim is drafted. *AT&T*, 172 F.3d at 1357, 50 USPQ2d at 1451. See also *State Street*, 149 F.3d at 1375, 47 USPQ2d at 1602 wherein the Federal Circuit explained:

The question of whether a claim encompasses statutory subject matter should not focus on which of the four categories of subject matter a claim is directed to -- process, machine, manufacture, or composition of matter -- [provided the subject matter falls into at least one category of statutory subject matter] but rather on the essential characteristics of the subject matter, in particular, its practical utility.

For example, a claimed invention may be a combination of devices that appear to be directed to a machine and one or more steps of the functions performed by the machine. Such instances of mixed attributes, although potentially confusing as to which category of patentable subject matter the claim belongs, does not affect the analysis to be performed by USPTO personnel. **Note that an apparatus claim with process steps is not classified as a "hybrid" claim; instead, it is simply an apparatus claim including functional limitations.** See, e.g., *R.A.C.C. Indus. v. Stun-Tech, Inc.*, 178 F.3d 1309 (Fed. Cir. 1998) (unpublished). The burden is on the USPTO to set forth a *prima facie* case of unpatentability. (Emphasis added). Manual of Patent Examining Procedure (MPEP), Eighth Edition, August 2001, Latest Revision August 2006, § 2106 IV.B.

Applicants respectfully submit that claims 1-5 and 6-13 clearly fall within at least one of the four enumerated categories of patentable subject matter recited in section 101, and thus comply with the statutory invention requirements of 35 U.S.C. § 101. By way of example, but not limited to this example, independent claim 1 includes

An apparatus comprising:

one or more **cryptographic units**; and
a **memory** to store one or more data encryption keys and an associated header for the one or more data encryption keys, wherein the associated header defines which of the one or more cryptographic units are to use the data encryption key.

Thus, independent claim 1 includes one or more cryptographic units and a memory. At least this subject matter, as included in independent claim 1, provides subject matter within one of the four enumerated categories of patentable subject matter as recited in 35 U.S.C. § 101. The fact that independent claim 1 also includes functional limitations does not render the claim non-statutory, as suggested by the Office Action. As is clearly stated in the MPEP as quoted above, "Note that an apparatus claim with process steps is not classified as a 'hybrid' claim; instead, it is

simply an apparatus claim including functional limitations." Therefore, the apparatus as claimed in independent claim 1 is not rendered non-statutory by the inclusion of functional limitations.

Claims 9-12, 16-18, 23-25 and 26-29

Claims 9-12, 16-18, 23-25 and 26-29 were rejected under 35 USC § 101 because the claimed invention is directed to non-statutory subject matter. Specifically, the Office rejected these claims because such claims fail to produce a useful, concrete and tangible result because of a conditional statement in the claims. Producing a useful, concrete and tangible result is a requirement when the claims are not within one of the four enumerated statutory categories of patentable subject matter recited in section 101 and the claims are directed to *no more than an abstract idea, a natural phenomena, or a law of nature*. As further described below, claims 9-12, 16-18, 23-25 and 26-29 are within one of the four enumerated statutory categories of patentable subject matter recited in section 101 and the claims are not directed to *no more than an abstract idea, a natural phenomena, or a law of nature*. Accordingly, there is no *per se* requirement that claims must produce a useful, concrete and tangible result to be statutory under 35 USC § 101. Moreover, claims having conditional statements are not *per se* non-statutory under 35 USC § 101.

Claims 9-12 are system claims; claims 16-18 are method claims; claims 23-29 are machine-readable medium claims. Such claims fall within at least one of the four enumerated categories of patentable subject matter recited in 35 U.S.C. § 101 (set forth above). By way of example, independent claim 9 includes a dipole antenna, an application processor and a cryptographic processor with a number of components. By way of example, independent claims 16 and 23 includes receiving a primitive instruction into a cryptographic processor and retrieving the data encryption key and an associated header for the data encryption key. By way of example, independent claim 26 includes receiving a primitive instruction into a cryptographic processor from an application executing on an application processor; generating a challenge for use of the cryptographic key back to the application; and receiving a response to the challenge into the cryptographic processor from the application. The fact that there is a conditional limitation does not render claims 9-12, 16-18, 23-25 and 26-29 non-statutory.

Further, the Office Action has not shown how claims 9-12, 16-18, 23-25 and 26-29 are directed to no more than an abstract idea, a natural phenomena, or a law of nature. Here, independent claim 9 is directed to an apparatus including a dipole antenna, an application processor and a cryptographic processor with a number of components. Independent claims 16 and 23 includes receiving a primitive instruction into a cryptographic processor and retrieving the data encryption key and an associated header for the data encryption key. Independent claim 26 includes receiving a primitive instruction into a cryptographic processor from an application executing on an application processor; generating a challenge for use of the cryptographic key back to the application; and receiving a response to the challenge into the cryptographic processor from the application. Thus, these claims are not merely an abstract idea, a natural phenomena, or a law of nature.

Still further, since claims 9-12, 16-18, 23-25 and 26-29 are directed to an apparatus, a method or a machine-readable medium, and not merely an abstract idea, a natural phenomena, or a law a nature, the statement in the Office Action wherein – “[t]his claimed subject matter lacks a practical application of a judicial exception . . . since it fails to produce a useful, concrete and tangible result” are not applicable, as these tests are only used to determine whether claims that do fall under one of these judicial exceptions may still qualify for patent protection. Since claims 9-12, 16-18, 23-25 and 26-29 do not fall into the category of being no more than an abstract idea, a natural phenomena, or a law of nature, these tests are not necessary or required in order to qualify claims 9-12, 16-18, 23-25 and 26-29 as statutory subject matter under 35 U.S.C. § 101.

§102 Rejection of the Claims

Anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration. *In re Dillon* 919 F.2d 688, 16 USPQ2d 1897, 1908 (Fed. Cir. 1990) (en banc), cert. denied, 500 U.S. 904 (1991).

Claims 1-5

Claims 1-5 were rejected under 35 USC § 102(e) as being taught by Kaplan et al. (U.S. Patent 6,704,871 B1). Among the differences, claim 1 recites “wherein the associated header defines which of the one or more cryptographic units are to use the data encryption key.” The Office indicated that this limitation is disclosed by Kaplan at col. 6, lines 40-45. Applicant respectfully traverses. This section of Kaplan does relate to storage of keys. However, this section of Kaplan does not disclose that the associated header for the data encryption key defines which of the cryptographic units are to use the data encryption key.

Because Kaplan does not disclose each element of claim 1, Applicant respectfully submits that the rejection of claim 1 under 35 U.S.C. §102 has been overcome. Because the claims that depend from claim 1 depend from and further define claim 1, Applicant respectfully submits that the rejection of the dependent claims under 35 U.S.C. §102 has been overcome.

Claims 6-8 and 13-15

Claims 6-8 and 13-15 were rejected under 35 USC § 102(e) as being taught by Dariel (U.S. Patent 7,058,818).

Among the differences, claims 6 and 13 recite “wherein the intermediate result is not accessible external to the cryptographic processor.” For claim 6, the Office indicated that this limitation is disclosed by Dariel at col. 4, lines 50-52. For claim 13, the Office indicated that this limitation is disclosed by Dariel at col. 4, lines 19-25; col. 3, lines 1-55; col. 3, lines 19-25, col. 6, lines 14-27 and Figure #. Applicant respectfully traverses. These sections of Dariel relate to storing encrypted data in a nonvolatile memory. However, these sections do not disclose two different units within a cryptographic processor, wherein an intermediate result generated by a first unit for use by a second unit of a cryptographic processor is not accessible external to the cryptographic processor.

Because Dariel does not disclose each element of claims 6 and 13, Applicant respectfully submits that the rejection of claims 6 and 13 under 35 U.S.C. §102 has been overcome. Because the claims that depend from claims 6 and 13 depend from and further define claims 6 and 13, Applicant respectfully submits that the rejection of the dependent claims under 35 U.S.C. §102 has been overcome.

Claims 9-12 and 19-22

Claims 9-12 and 19-22 were also rejected under 35 USC § 102(e) as being taught by Dariel.

Among the differences, claim 9 recites “a controller to load the cryptographic key into one of the number of cryptographic units for execution of the cryptographic operation if the response is correct.” Therefore, the controller is to load the key into a cryptographic unit for execution of a cryptographic operation if the response (to a challenge to the application processor that generates an instruction for the cryptographic operation) is correct. The Office indicated that this limitation regarding loading the key if the response is correct is disclosed by Dariel at col. 7, lines 20-32. Applicant respectfully traverses. This section of Dariel relates to authenticating a remote platform 28 to a server 50 for transmission of encrypted data. This section does not disclose loading a key into a cryptographic unit for execution of a cryptographic operation if a response to a challenge (from the application processor that generated the primitive instruction for a cryptographic operation) is correct.

Because Dariel does not disclose each element of claim 9, Applicant respectfully submits that the rejection of claim 9 under 35 U.S.C. §102 has been overcome. Because the claims that depend from claim 9 depend from and further define claim 9, Applicant respectfully submits that the rejection of the dependent claims under 35 U.S.C. §102 has been overcome.

Claim 19 includes a similar limitation to claim 9 – “performing the following operations, if the response is correct.” The Office did not indicate where this limitation was disclosed. Accordingly, for at least the reasons set forth for claim 9, Applicant respectfully submits that the rejection of claim 19 under 35 U.S.C. §102 has been overcome. Because the claims that depend from claim 19 depend from and further define claim 19, Applicant respectfully submits that the rejection of the dependent claims under 35 U.S.C. §102 has been overcome.

Claims 16-18

Claims 16-18 were also rejected under 35 USC § 102(e) as being taught by Dariel.

Among the differences, claim 16 recites “performing an operation within one of the one or more cryptographic units using the data encryption key, if the associated header defines the one of the one or more cryptographic units.” The Office indicated that this limitation was disclosed by Dariel at col. 3, lines 25-62 and col. 7, lines 20-48. These sections of Dariel relate to a server and a user platform. The user platform receives encrypted data from the server and decrypts the data. The data is then transformed into analog signals. However, these sections of Dariel do not disclose performing an operation in a cryptographic unit using a key if the header associated with that key defines the cryptographic unit.

Because Dariel does not disclose each element of claim 16, Applicant respectfully submits that the rejection of claim 16 under 35 U.S.C. §102 has been overcome. Because the claims that depend from claim 16 depend from and further define claim 16, Applicant respectfully submits that the rejection of the dependent claims under 35 U.S.C. §102 has been overcome.

Claims 23-25

Claims 23-25 were rejected under 35 USC § 102(e) as being taught by Howard et al. (U.S. Patent 7,269,736 B2).

Among the differences, claim 23 recites “performing an operation within one of the one or more cryptographic units using the data encryption key, if the associated header defines the one of the one or more cryptographic units.” The Office indicated that this limitation is disclosed by Howard at col. 2, lines 60-65 and col. 5, lines 17-49. Applicant respectfully traverses. These sections of Howard relate to a distributed encryption scheme where data to be encrypted and decrypted are provided by a first device to a second device. The second device performs the encryption and decryption. However, these sections of Howard do not disclose performing an operation in a cryptographic unit using a key if the header associated with that key defines the cryptographic unit.

Because Howard does not disclose each element of claim 23, Applicant respectfully submits that the rejection of claim 23 under 35 U.S.C. §102 has been overcome. Because the claims that depend from claim 23 depend from and further define claim 23, Applicant respectfully submits that the rejection of the dependent claims under 35 U.S.C. §102 has been overcome.

Claims 26-29

Claims 26-29 were rejected under 35 USC § 102(e) as being taught by Howard. Among the differences, claim 26 recites “performing the following operations, if the response is correct.” The Office did not indicate what sections of Howard include this limitation.

Because Howard does not disclose each element of claim 26, Applicant respectfully submits that the rejection of claim 26 under 35 U.S.C. §102 has been overcome. Because the claims that depend from claim 26 depend from and further define claim 26, Applicant respectfully submits that the rejection of the dependent claims under 35 U.S.C. §102 has been overcome.

RESERVATION OF RIGHTS

In the interest of clarity and brevity, Applicant may not have addressed every assertion made in the Office Action. Applicant’s silence regarding any such assertion does not constitute any admission or acquiescence. Applicant reserves all rights not exercised in connection with this response, such as the right to challenge or rebut any tacit or explicit characterization of any reference or of any of the present claims, the right to challenge or rebut any asserted factual or legal basis of any of the rejections, the right to swear behind any cited reference such as provided under 37 C.F.R. § 1.131 or otherwise, or the right to assert co-ownership of any cited reference. Applicant does not admit that any of the cited references or any other references of record are relevant to the present claims, or that they constitute prior art. To the extent that any rejection or assertion is based upon the Examiner’s personal knowledge, rather than any objective evidence of record as manifested by a cited prior art reference, Applicant timely objects to such reliance on Official Notice, and reserves all rights to request that the Examiner provide a reference or affidavit in support of such assertion, as required by MPEP § 2144.03. Applicant reserves all

rights to pursue any cancelled claims in a subsequent patent application claiming the benefit of priority of the present patent application, and to request rejoinder of any withdrawn claim, as required by MPEP § 821.04.

CONCLUSION

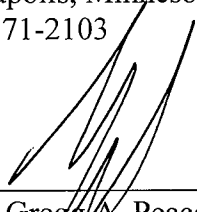
Applicants respectfully submit that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicants' attorney at (612) 371-2103 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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Date 6-17-08

By  _____

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being filed using the USPTO's electronic filing system EFS-Web, and is addressed to: MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 11th day of June 2008.

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Signature

